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                    *                                                    +
SEQ ID NO:11  MSSTQDYIGE----------------------------------------------------
SEQ ID NO:02  MLLTKPYLSNSLLPVPSPPPSGPTLSSNHASPLAAPTCR-RSRLRISATSTAAPSPSSAA
SEQ ID NO:04  MLLAKPHLSSSSF-LPSTRVSSPAPGPNHAKPIAASPAP-RRCLRLAVTSAAAPAASSAE
SEQ ID NO:06  MMAG----AAKTLTNLCPSFPFPTKPQNQLTTSHAFPSTRLRHRAISAVANAAQPPLAAA
SEQ ID NO:08  MLLTKPH---PALTLPSASLPNPNLKAARVRPLASSAPHGRRGLRV---SASSSSLAPAQ
SEQ ID NO:12  MXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXAX
              1                                                          60

                +     **++*** **+** * *+* ********++++++++ *+*++++***+ **
SEQ ID NO:11  ---EAATRVKILSEALPYIQHFAGRTVVVKYGGAAMKDSNLKDKVIRDIVFMASVGIRPV
SEQ ID NO:02  AATASLSRVDVLSEALPFIQRFKGKTVVVKYGGAAMKSPELQASVIRDLVLLSCVGLRPV
SEQ ID NO:04  AA-AALSRVDVLSEALPFIQRFKGKTVVVKYGGAAMKSPELQASVIRDLVLLSCVGLHPV
SEQ ID NO:06  TATEGQYRVDVLSESLPFIQKFRGKTIVVKYGGAAMKSPELQASVINDLVLLSCVGLRPV
SEQ ID NO:08  AASAALNRVDVLSEALPFIQRFKGKTVVVKYGGAAMKSPELQASVIRDLVLLSCVGLRPV
SEQ ID NO:12   AXXXXXRVDVLSEXLPFIQXFXGKTXVVKYGGAAMKSPELQASVIXDLVLLSCVGLXPV
              61                                                         120

              +**********+** +      *+ *****                 * +**   *  *
SEQ ID NO:11  VVHGGGPEINTWLDKVGIEPQFKDGLRVTDAATMDIVEMVLVGRVNKELVNLINQAGGKA
SEQ ID NO:02  LVHGGGPEINSWLLRVGVEPQFRDGLRVTDALTMEVVEMVLVGKVNKNLVSLINIAGGTA
SEQ ID NO:04  LVHGGGPEINSWLLRVGVEPQFRNGLRVTDALNMEVVEMVLVRKVNKELLSLIKLPGGSA
SEQ ID NO:06  LVHGGGPEINSWLGRLNIPAVFRDGLRVTDADTMEIVSMVLVGKVNKTLVSLINKAGATA
SEQ ID NO:08  LVHGGGPEINSWLQRVGVXPQFRNGLRVTXXXXXXXXXXXXXXXXXKQLLSLIRPAGTTA
SEQ ID NO:12  LVHGGGPEINSWLXRXXXXXXFRXGLRVTDAXXMEXVXMVLVXKVNKXLXSLIXXXGXXA
              121                                                        180
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(57) Abstract

This invention relates to an isolated nucleic acid fragment encoding an N-acetylglutamate kinase. The invention also relates to the construction of a chimeric gene encoding all or a portion of the N-acetylglutamate kinase, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the N-acetylglutamate kinase in a transformed cell host.